D3C0
#15

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/073,293 A
Source: OIPE
Date Processed by STIC: 07/08/2005

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/073,293 A

CRF Edit Date: 07/08/2005

Edited by: KD

___ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

_____

___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

_____

✓ Deleted: ___ invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

_____

___ Moved responses to same line as heading/numeric identifier, specifically:

_____

___ Other:

_____

_____

_____

Revised 09/09/2003

OIPE

RAW SEQUENCE LISTING DATE: 07/08/2005
PATENT APPLICATION: **US/10/073,293A** TIME: 12:14:14

Input Set : **N:\KEISHA\10073293a.txt**
Output Set: **N:\CRF4\07082005\J073293A.raw**

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  5 <110> APPLICANT: TABOLINA, EKATERINA
  7       RYBAK, KONSTANTIN
  9       KHOURGES, EVGENI
 11       VOROSHILOVA, ELVIRA
 13       GUSYATINER, MIKHAIL
 17 <120> TITLE OF INVENTION: METHOD FOR PRODUCING L-AMINO ACID USING BACTERIA BELONGING
TO THE GENUS
 18       ESCHERICHIA
 22 <130> FILE REFERENCE: 219594US0
 26 <140> CURRENT APPLICATION NUMBER: 10/073,293A
 28 <141> CURRENT FILING DATE: 2002-02-13
 32 <150> PRIOR APPLICATION NUMBER: RU 2001103865
 34 <151> PRIOR FILING DATE: 2001-02-13
 38 <150> PRIOR APPLICATION NUMBER: RU 2001104998
 40 <151> PRIOR FILING DATE: 2001-02-26
 44 <150> PRIOR APPLICATION NUMBER: RU 2001104999
 46 <151> PRIOR FILING DATE: 2001-02-26
 50 <150> PRIOR APPLICATION NUMBER: RU 2001117632
 52 <151> PRIOR FILING DATE: 2001-06-28
 56 <150> PRIOR APPLICATION NUMBER: RU 2001117633
 58 <151> PRIOR FILING DATE: 2001-06-28
 62 <160> NUMBER OF SEQ ID NOS: 16
 66 <170> SOFTWARE: PatentIn version 3.1
 70 <210> SEQ ID NO: 1
 72 <211> LENGTH: 26
 74 <212> TYPE: DNA
 76 <213> ORGANISM: Artificial Sequence
 80 <220> FEATURE:
 82 <223> OTHER INFORMATION: Synthetic DNA
 84 <400> SEQUENCE: 1
 85 ggtctagaca atcgttaagc gtacac                                        26
 88 <210> SEQ ID NO: 2
 90 <211> LENGTH: 26
 92 <212> TYPE: DNA
 94 <213> ORGANISM: Artificial Sequence
 98 <220> FEATURE:
100 <223> OTHER INFORMATION: Synthetic DNA
102 <400> SEQUENCE: 2
103 ccggatccga tatagtaacg acagtg                                       26
106 <210> SEQ ID NO: 3
108 <211> LENGTH: 738
110 <212> TYPE: DNA
112 <213> ORGANISM: Escherichia coli
116 <220> FEATURE:
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RAW SEQUENCE LISTING DATE: 07/08/2005
PATENT APPLICATION: **US/10/073,293A** TIME: 12:14:14

Input Set : **N:\KEISHA\10073293a.txt**
Output Set: **N:\CRF4\07082005\J073293A.raw**

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    120 <222> LOCATION: (1)..(735)
    122 <223> OTHER INFORMATION:
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    129 1               5                   10                  15
    131 gaa gga tgc aaa gac agt tta ccg att gtt att agt tat att ccg gtg       96
    132 Glu Gly Cys Lys Asp Ser Leu Pro Ile Val Ile Ser Tyr Ile Pro Val
    133             20                  25                  30
    135 gcc ttt gcg ttc ggt ctg aat gcg acc cgt ctg gga ttc tct cct ctc      144
    136 Ala Phe Ala Phe Gly Leu Asn Ala Thr Arg Leu Gly Phe Ser Pro Leu
    137         35                  40                  45
    139 gaa agc gtt ttt ttc tcc tgc atc att tat gca ggc gcg agc cag ttc      192
    140 Glu Ser Val Phe Phe Ser Cys Ile Ile Tyr Ala Gly Ala Ser Gln Phe
    141     50                  55                  60
    143 gtc att acc gcg atg ctg gca gcc ggg agt agt ttg tgg att gct gca      240
    144 Val Ile Thr Ala Met Leu Ala Ala Gly Ser Ser Leu Trp Ile Ala Ala
    145 65                  70                  75                  80
    147 ctg acc gtc atg gca atg gat gtt cgc cat gtg ttg tat ggc ccg tca      288
    148 Leu Thr Val Met Ala Met Asp Val Arg His Val Leu Tyr Gly Pro Ser
    149                 85                  90                  95
    151 ctg cgt agc cgt att att cag cgt ctg caa aaa tcg aaa acc gcc ctg      336
    152 Leu Arg Ser Arg Ile Ile Gln Arg Leu Gln Lys Ser Lys Thr Ala Leu
    153             100                 105                 110
    155 tgg gcg ttt ggc ctg acg gat gag gtt ttt gcc gcc gca acc gca aaa      384
    156 Trp Ala Phe Gly Leu Thr Asp Glu Val Phe Ala Ala Ala Thr Ala Lys
    157         115                 120                 125
    159 ctg gta cgc aat aat cgc cgc tgg agc gag aac tgg atg atc ggc att      432
    160 Leu Val Arg Asn Asn Arg Arg Trp Ser Glu Asn Trp Met Ile Gly Ile
    161     130                 135                 140
    163 gcc ttc agt tca tgg tca tcg tgg gta ttt ggt acg gta ata ggg gca      480
    164 Ala Phe Ser Ser Trp Ser Ser Trp Val Phe Gly Thr Val Ile Gly Ala
    165 145                 150                 155                 160
    167 ttc tcc ggc agc ggc ttg ctg caa ggt tat ccc gcc gtt gaa gct gca      528
    168 Phe Ser Gly Ser Gly Leu Leu Gln Gly Tyr Pro Ala Val Glu Ala Ala
    169                 165                 170                 175
    171 tta ggt ttt atg ctt ccg gca ctc ttt atg agt ttc ctg ctc gcc tct      576
    172 Leu Gly Phe Met Leu Pro Ala Leu Phe Met Ser Phe Leu Leu Ala Ser
    173             180                 185                 190
    175 ttc cag cgc aaa caa tct ctt tgc gtt acc gca gcg tta gtt ggt gcc      624
    176 Phe Gln Arg Lys Gln Ser Leu Cys Val Thr Ala Ala Leu Val Gly Ala
    177         195                 200                 205
    179 ctt gca ggc gta acg cta ttt tct att ccc gtc gcc att ctg gca ggc      672
    180 Leu Ala Gly Val Thr Leu Phe Ser Ile Pro Val Ala Ile Leu Ala Gly
    181     210                 215                 220
    183 att gtc tgt ggc tgc ctc act gcg tta atc cag gca ttc tgg caa gga      720
    184 Ile Val Cys Gly Cys Leu Thr Ala Leu Ile Gln Ala Phe Trp Gln Gly
    185 225                 230                 235                 240
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RAW SEQUENCE LISTING DATE: 07/08/2005
PATENT APPLICATION: **US/10/073,293A** TIME: 12:14:14

Input Set : **N:\KEISHA\10073293a.txt**
Output Set: **N:\CRF4\07082005\J073293A.raw**

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187 gcg ccc gat gag cta tga                                             738
188 Ala Pro Asp Glu Leu
189                 245
192 <210> SEQ ID NO: 4
194 <211> LENGTH: 245
196 <212> TYPE: PRT
198 <213> ORGANISM: Escherichia coli
202 <400> SEQUENCE: 4
204 Met Glu Ser Pro Thr Pro Gln Pro Ala Pro Gly Ser Ala Thr Phe Met
205 1               5                  10                  15
208 Glu Gly Cys Lys Asp Ser Leu Pro Ile Val Ile Ser Tyr Ile Pro Val
209             20                  25                  30
212 Ala Phe Ala Phe Gly Leu Asn Ala Thr Arg Leu Gly Phe Ser Pro Leu
213         35                  40                  45
216 Glu Ser Val Phe Phe Ser Cys Ile Ile Tyr Ala Gly Ala Ser Gln Phe
217     50                  55                  60
220 Val Ile Thr Ala Met Leu Ala Ala Gly Ser Ser Leu Trp Ile Ala Ala
221 65                  70                  75                  80
224 Leu Thr Val Met Ala Met Asp Val Arg His Val Leu Tyr Gly Pro Ser
225                 85                  90                  95
228 Leu Arg Ser Arg Ile Ile Gln Arg Leu Gln Lys Ser Lys Thr Ala Leu
229             100                 105                 110
232 Trp Ala Phe Gly Leu Thr Asp Glu Val Phe Ala Ala Ala Thr Ala Lys
233         115                 120                 125
236 Leu Val Arg Asn Asn Arg Arg Trp Ser Glu Asn Trp Met Ile Gly Ile
237     130                 135                 140
240 Ala Phe Ser Ser Trp Ser Ser Trp Val Phe Gly Thr Val Ile Gly Ala
241 145                 150                 155                 160
244 Phe Ser Gly Ser Gly Leu Leu Gln Gly Tyr Pro Ala Val Glu Ala Ala
245                 165                 170                 175
248 Leu Gly Phe Met Leu Pro Ala Leu Phe Met Ser Phe Leu Leu Ala Ser
249             180                 185                 190
252 Phe Gln Arg Lys Gln Ser Leu Cys Val Thr Ala Ala Leu Val Gly Ala
253         195                 200                 205
256 Leu Ala Gly Val Thr Leu Phe Ser Ile Pro Val Ala Ile Leu Ala Gly
257     210                 215                 220
260 Ile Val Cys Gly Cys Leu Thr Ala Leu Ile Gln Ala Phe Trp Gln Gly
261 225                 230                 235                 240
264 Ala Pro Asp Glu Leu
265                 245
268 <210> SEQ ID NO: 5
270 <211> LENGTH: 336
272 <212> TYPE: DNA
274 <213> ORGANISM: Escherichia coli
278 <220> FEATURE:
280 <221> NAME/KEY: CDS
282 <222> LOCATION: (1)..(333)
284 <223> OTHER INFORMATION:
W--> 288 <400> 5
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RAW SEQUENCE LISTING DATE: 07/08/2005
PATENT APPLICATION: **US/10/073,293A** TIME: 12:14:14

Input Set : **N:\KEISHA\10073293a.txt**
Output Set: **N:\CRF4\07082005\J073293A.raw**

```
289 atg agc tat gag gtt ctg ctg ctt ggg tta cta gtt ggc gtg gcg aat       48
290 Met Ser Tyr Glu Val Leu Leu Leu Gly Leu Leu Val Gly Val Ala Asn
291 1               5                   10                  15
293 tat tgc ttc cgc tat ttg ccg ctg cgc ctg cgt gtg ggt aat gcc cgc       96
294 Tyr Cys Phe Arg Tyr Leu Pro Leu Arg Leu Arg Val Gly Asn Ala Arg
295             20                  25                  30
297 cca acc aaa cgt ggc gcg gta ggt att ttg ctc gac acc att ggc atc      144
298 Pro Thr Lys Arg Gly Ala Val Gly Ile Leu Leu Asp Thr Ile Gly Ile
299         35                  40                  45
301 gcc tcg ata tgc gct ctg ctg gtt gtc tct acc gca cca gaa gtg atg      192
302 Ala Ser Ile Cys Ala Leu Leu Val Val Ser Thr Ala Pro Glu Val Met
303     50                  55                  60
305 cac gat aca cgc cgt ttc gtg ccc acg ctg gtc ggc ttc gcg gta ctg      240
306 His Asp Thr Arg Arg Phe Val Pro Thr Leu Val Gly Phe Ala Val Leu
307 65                  70                  75                  80
309 ggt gcc agt ttc tat aaa aca cgc agc att atc atc cca aca ctg ctt      288
310 Gly Ala Ser Phe Tyr Lys Thr Arg Ser Ile Ile Ile Pro Thr Leu Leu
311                 85                  90                  95
313 agt gcg ctg gcc tat ggg ctc gcc tgg aaa gtg atg gcg att ata taa      336
314 Ser Ala Leu Ala Tyr Gly Leu Ala Trp Lys Val Met Ala Ile Ile
315             100                 105                 110
318 <210> SEQ ID NO: 6
320 <211> LENGTH: 111
322 <212> TYPE: PRT
324 <213> ORGANISM: Escherichia coli
328 <400> SEQUENCE: 6
330 Met Ser Tyr Glu Val Leu Leu Leu Gly Leu Leu Val Gly Val Ala Asn
331 1               5                   10                  15
334 Tyr Cys Phe Arg Tyr Leu Pro Leu Arg Leu Arg Val Gly Asn Ala Arg
335             20                  25                  30
338 Pro Thr Lys Arg Gly Ala Val Gly Ile Leu Leu Asp Thr Ile Gly Ile
339         35                  40                  45
342 Ala Ser Ile Cys Ala Leu Leu Val Val Ser Thr Ala Pro Glu Val Met
343     50                  55                  60
346 His Asp Thr Arg Arg Phe Val Pro Thr Leu Val Gly Phe Ala Val Leu
347 65                  70                  75                  80
350 Gly Ala Ser Phe Tyr Lys Thr Arg Ser Ile Ile Ile Pro Thr Leu Leu
351                 85                  90                  95
354 Ser Ala Leu Ala Tyr Gly Leu Ala Trp Lys Val Met Ala Ile Ile
355             100                 105                 110
358 <210> SEQ ID NO: 7
360 <211> LENGTH: 37
362 <212> TYPE: DNA
364 <213> ORGANISM: Artificial Sequence
368 <220> FEATURE:
370 <223> OTHER INFORMATION: Synthetic DNA
372 <400> SEQUENCE: 7
373 cctttggtac cagatctgcg ggcagtgagc gcaacgc                              37
376 <210> SEQ ID NO: 8
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RAW SEQUENCE LISTING DATE: 07/08/2005
PATENT APPLICATION: **US/10/073,293A** TIME: 12:14:14

Input Set : **N:\KEISHA\10073293a.txt**
Output Set: **N:\CRF4\07082005\J073293A.raw**

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    380 <212> TYPE: DNA
    382 <213> ORGANISM: Artificial Sequence
    386 <220> FEATURE:
    388 <223> OTHER INFORMATION: Synthetic DNA
    390 <400> SEQUENCE: 8
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    394 <210> SEQ ID NO: 9
    396 <211> LENGTH: 28
    398 <212> TYPE: DNA
    400 <213> ORGANISM: Artificial Sequence
    404 <220> FEATURE:
    406 <223> OTHER INFORMATION: Synthetic DNA
    408 <400> SEQUENCE: 9
    409 ggtctagata tggctaacat tatccggc                                        28
    412 <210> SEQ ID NO: 10
    414 <211> LENGTH: 28
    416 <212> TYPE: DNA
    418 <213> ORGANISM: Artificial Sequence
    422 <220> FEATURE:
    424 <223> OTHER INFORMATION: Synthetic DNA
    426 <400> SEQUENCE: 10
    427 ccggatccaa acggagcatg gcagctcc                                        28
    430 <210> SEQ ID NO: 11
    432 <211> LENGTH: 648
    434 <212> TYPE: DNA
    436 <213> ORGANISM: Escherichia coli
    440 <220> FEATURE:
    442 <221> NAME/KEY: CDS
    444 <222> LOCATION: (1)..(645)
    446 <223> OTHER INFORMATION:
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    453 1               5                  10                  15
    455 ggg tta ttt gcg ctg gtc aac ccg gta ggg att att ccc gtc ttt atc      96
    456 Gly Leu Phe Ala Leu Val Asn Pro Val Gly Ile Ile Pro Val Phe Ile
    457             20                  25                  30
    459 agc atg acc agt tat cag aca gcg gca gcg cga aac aaa act aac ctt     144
    460 Ser Met Thr Ser Tyr Gln Thr Ala Ala Ala Arg Asn Lys Thr Asn Leu
    461         35                  40                  45
    463 aca gcc aac ctg tct gtg gcc att atc ttg tgg atc tcg ctt ttt ctc     192
    464 Thr Ala Asn Leu Ser Val Ala Ile Ile Leu Trp Ile Ser Leu Phe Leu
    465     50                  55                  60
    467 ggc gac acg att cta caa ctt ttt ggt ata tca att gat tcg ttc cgt     240
    468 Gly Asp Thr Ile Leu Gln Leu Phe Gly Ile Ser Ile Asp Ser Phe Arg
    469 65                  70                  75                  80
    471 atc gcc ggg ggt atc ctg gtg gtg aca ata gcg atg tcg atg atc agc     288
    472 Ile Ala Gly Gly Ile Leu Val Val Thr Ile Ala Met Ser Met Ile Ser
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VERIFICATION SUMMARY DATE: 07/08/2005
PATENT APPLICATION: **US/10/073,293A** TIME: 12:14:15

Input Set : **N:\KEISHA\10073293a.txt**
Output Set: **N:\CRF4\07082005\J073293A.raw**

L:126 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3,Line#:122
L:288 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:5,Line#:284
L:450 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:11,Line#:446
L:632 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:15,Line#:628

Raw Sequence Listing before editing,
for reference only

OIPE

RAW SEQUENCE LISTING DATE: 07/01/2005
PATENT APPLICATION: **US/10/073,293A** TIME: 09:34:03

Input Set : **N:\DA\PTO.DA.txt**
Output Set: **N:\CRF4\06302005\J073293A.raw**

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      7       RYBAK, KONSTANTIN
      9       KHOURGES, EVGENI
     11       VOROSHILOVA, ELVIRA
     13       GUSYATINER, MIKHAIL
     17 <120> TITLE OF INVENTION: METHOD FOR PRODUCING L-AMINO ACID USING BACTERIA BELONGING
TO THE GENUS
     18       ESCHERICHIA
     22 <130> FILE REFERENCE: 219594US0
     26 <140> CURRENT APPLICATION NUMBER: 10/073,293A
     28 <141> CURRENT FILING DATE: 2002-02-13
     32 <150> PRIOR APPLICATION NUMBER: RU 2001103865
     34 <151> PRIOR FILING DATE: 2001-02-13
     38 <150> PRIOR APPLICATION NUMBER: RU 2001104998
     40 <151> PRIOR FILING DATE: 2001-02-26
     44 <150> PRIOR APPLICATION NUMBER: RU 2001104999
     46 <151> PRIOR FILING DATE: 2001-02-26
     50 <150> PRIOR APPLICATION NUMBER: RU 2001117632
     52 <151> PRIOR FILING DATE: 2001-06-28
     56 <150> PRIOR APPLICATION NUMBER: RU 2001117633
     58 <151> PRIOR FILING DATE: 2001-06-28
     62 <160> NUMBER OF SEQ ID NOS: 16
     66 <170> SOFTWARE: PatentIn version 3.1
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Does Not Comply
Corrected Diskette Needed
(PG. 2)

ERRORED SEQUENCES

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    688 <211> LENGTH: 197
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    692 <213> ORGANISM: Escherichia coli
    696 <400> SEQUENCE: 16
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    699 1               5                  10                  15
    702 Pro Leu Gly Asn Leu Pro Ile Phe Met Ser Val Leu Lys His Thr Glu
    703             20                  25                  30
    706 Pro Lys Arg Arg Arg Ala Ile Met Val Arg Glu Leu Leu Ile Ala Leu
    707         35                  40                  45
    710 Leu Val Met Leu Val Phe Leu Phe Ala Gly Glu Lys Ile Leu Ala Phe
    711     50                  55                  60
    714 Leu Ser Leu Arg Ala Glu Thr Val Ser Ile Ser Gly Gly Ile Ile Leu
    715 65                  70                  75                  80
    718 Phe Leu Ile Ala Ile Lys Met Ile Phe Pro Ser Ala Ser Gly Asn Ser
    719                 85                  90                  95
```

RAW SEQUENCE LISTING DATE: 07/01/2005
PATENT APPLICATION: US/10/073,293A TIME: 09:34:03

Input Set : N:\DA\PTO.DA.txt
Output Set: N:\CRF4\06302005\J073293A.raw

```
722 Ser Gly Leu Pro Ala Gly Glu Glu Pro Phe Ile Val Pro Leu Ala Ile
723             100                 105                 110
726 Pro Leu Val Ala Gly Pro Thr Ile Leu Ala Thr Leu Met Leu Leu Ser
727         115                 120                 125
730 His Gln Tyr Pro Asn Gln Met Gly His Leu Val Ile Ala Leu Leu Leu
731     130                 135                 140
734 Ala Trp Gly Gly Thr Phe Val Ile Leu Leu Gln Ser Ser Leu Phe Leu
735 145                 150                 155                 160
738 Arg Leu Leu Gly Glu Lys Gly Val Asn Ala Leu Glu Arg Leu Met Gly
739                 165                 170                 175
742 Leu Ile Leu Val Met Met Ala Thr Gln Met Phe Leu Asp Gly Ile Arg
743             180                 185                 190
746 Met Trp Met Lys Gly
747         195
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VERIFICATION SUMMARY DATE: 07/01/2005
PATENT APPLICATION: **US/10/073,293A** TIME: 09:34:04

Input Set : **N:\DA\PTO.DA.txt**
Output Set: **N:\CRF4\06302005\J073293A.raw**

L:126 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3,Line#:122
L:288 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:5,Line#:284
L:450 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:11,Line#:446
L:632 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:15,Line#:628
L:753 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16